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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,786

09/24/2003

Alexandr Kuzminskiy

6-10

6382

7590

10/31/2006

Docket Administrator
Lucent Technologies Inc.
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EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,786

Applicant(s)

KUZMINSKIY ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 2 recites the limitation "the finite alphabet" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claims 3-15 are also rejected because they depend on a base rejected claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Smee et al U.S. patent No 7,082,174 B1.

As per claims 1 and 16, Smee et al teaches receiver of digital data bursts comprising: an antenna array (see fig.4a elements 132a-132K), a first space time filter having filter coefficients initialized by estimation over just training data in a received

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burst and providing symbol estimates (see fig.4a element 410a) and a second space time filter having filter coefficients initialized by estimation over the received burst and providing symbol estimates (see fig.4a element 410b), in use at least one pass to determine a symbol estimate in the received burst being undertaken by each space time filter and a selector operates to determine which of the first and second filters provides the symbol estimate closer to an expected value (see abstract fig.4a element 420a. and col.2, lines 50-67 and col.3, lines 10-22, 63-67 and col.4, lines 10-15 and col.8, lines 54-67).

As per claim 2, Smee et al teaches, in which the filter giving the symbol estimate closer to the expected value is selected by the selector to continue with at least one further pass to provide an updated symbol estimate to a projector to the finite alphabet so as to enable a decision as to the identity of that symbol to be made (see col.8, lines 54-67).

As per claim 3, Smee et al teaches in which for each new received burst, both filters perform at least one pass to determine a respective symbol estimate in the received burst, and the selector operates to determine which of the first and second filters provides the symbol estimate closer to an expected value (see col.8, lines 54-67).

As per claim 4, Smee et al teaches in which the estimation by the first filter and the second filter is least squares estimation (see col.8, lines 63-67).

As per claims 5, 9, 12-13, Smee et al teaches terminal for mobile telecommunications which is a base station or a mobile user terminal (see col.5, lines 40-43).

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As per claims 6, 10 and 14, Smee et al teaches operative to receive data bursts sent using orthogonal Walsh sequence is the same as the claimed (Orthogonal Frequency Division Multiplexing (OFDM)) (see col.17, lines 53-55).

As per claims 7, 11 and 15, Smee et al teaches operative to receive data bursts sent using Time Division Multiple Access (TDMA) (see col.3, lines 24-25).

As per claim 8, Smee et al teaches in which the estimation by the first filter and the second filter is least squares estimation (see col.8, lines 60-67).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

An et al U.S. Patent No 6,408,245 B1 teaches a filtering mechanization method.

Bottomley U.S. Patent No 5,822,380 teaches an apparatus and method for joint channel estimation.

Kuzminskiy et al U.S. Patent No 6,668,030 B2 teaches a radio communication.

Forseen et al U.S. Patent No 5,566,209 teaches transceiver algorithms of antennas array.

Khayrallah et al U.S. Patent No 6,574,293 B1 teaches receivers.

Syrjarinne U.S. Patent No 6,609,080 B1 teaches a multiple model.

Schreib U.S. Patent No 5,889,825 teaches a method of parameterizing a receiving device.

Upadhyay et al U.S. Patent No 6,115,409 teaches an integrated adaptive system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571 272 2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Emmanuel Bayard
Primary Examiner
Art Unit 2611

EMMANUEL BAYARD
PRIMARY EXAMINER

10/24/06

